

WHAT IS CLAIMED IS:

1. An electric motor, comprising:
a motor housing containing a stator, rotor, and armature assembly;
an endframe attached to said motor housing, said endframe including at least one first attachment component, and an opening aligned with said armature; and
a cover including at least one second attachment component, each said second attachment component in engagement with a respective said first attachment component to attach said cover to said endframe; and
one of a magnet receiver and a Hall effect sensor receiver disposed within at least one of said endframe and said cover.
2. The motor of Claim 1, further comprising a magnet disposed within said magnet receiver, said magnet axially aligned with said endframe opening.
3. The motor of Claim 2, further comprising a Hall effect sensor disposed within said Hall effect sensor receiver, at least a portion of said Hall effect sensor disposed proximate said magnet.
4. The motor of Claim 1, wherein said first attachment component comprises at least one resilient finger, and said second attachment component comprises at least one of a lug and a recess.
5. The motor of Claim 1, wherein said endframe includes at least one wall extending therefrom, each said wall disposed proximate a respective said first attachment component and conforming to an exterior surface of said cover.
6. The motor of Claim 1, wherein said armature includes a hole in an end thereof, and each of said endframe, magnet, and cover include openings axially aligned with said armature hole.
7. The motor of Claim 6, further comprising a drive component disposed within said armature hole, said drive component extending through said openings in said endframe, magnet, and cover.
8. An electric motor, comprising:
a motor housing containing a stator, rotor, and armature assembly;
an endframe attached to said motor housing, said endframe including an opening aligned with said armature;
a cover attached to said endframe, said cover and said endframe defining a cavity therebetween; and

means for attaching said cover to said endframe.

9. The motor of Claim 8, wherein said means for attaching said cover to said endframe comprises:

at least one resilient finger extending from one of said endframe and said cover; and

engagement structure on the other of said endframe and said cover, each said finger engaging said engagement structure to attach said cover to said endframe.

10. The motor of Claim 8, further comprising means for preventing disengagement of said cover from said endframe.

11. The motor of Claim 10, wherein said means for preventing disengagement of said cover from said endframe comprises at least one rigid wall extending from said endframe and abutting an outside surface of said cover.

12. The motor of Claim 8, further comprising:
a magnet disposed within said cavity, at least a portion of said magnet axially aligned with said endframe opening; and

an electronic sensor disposed within said cavity, at least a portion of said electronic sensor disposed closely adjacent said magnet.

13. The motor of Claim 12, wherein said armature, said magnet, and said cover each include holes therein, said armature hole, said endframe opening, said magnet hole, and said cover hole each axially aligned.

14. The motor of Claim 13, further comprising a drive component disposed within said armature hole, said drive component extending through said opening in said endframe, said magnet hole, and said cover opening.

15. An electric motor, comprising:
a motor housing containing a stator, rotor, and armature assembly;
an endframe attached to an open end of said motor housing, said endframe including an opening aligned with said armature;
a cover attached to said endframe, said cover and said endframe defining a cavity therebetween;
a magnet disposed within said cavity, said magnet aligned with said endframe opening; and
a Hall effect sensor captured between said endframe and said cover, said Hall effect sensor disposed proximate said magnet.

16. The motor of Claim 15, further comprising:
at least one resilient finger extending from one of said endframe and said cover; and
engagement structure on the other of said endframe and said cover, each said finger engaging said engagement structure to attach said cover to said endframe.
17. The motor of Claim 16, further comprising at least one wall extending from at least one of said endframe and said cover, each said wall disposed proximate a respective said finger.
18. An electric motor, comprising:
a motor housing containing a stator, rotor, and armature assembly;
an endframe attached to said motor housing, said endframe including an opening aligned with said armature;
a cover snap-fit to said endframe, said cover and said endframe defining a cavity therebetween;
a magnet and a Hall effect sensor each disposed within said cavity, said magnet aligned with said endframe opening, and said Hall effect sensor disposed proximate said magnet.
19. The motor of Claim 18, wherein said endframe includes a plurality of resilient fingers extending therefrom, said fingers engaging cooperating connection structure on said cover.
20. The motor of Claim 18, wherein said endframe further includes a plurality of walls extending therefrom proximate respective said fingers, said walls conforming to an outer surface of said cover.
21. An electric motor, comprising:
a motor housing containing a stator, rotor, and armature assembly;
an endframe attached to an open end of said motor housing, said endframe including an opening aligned with said armature, a plurality of resilient fingers extending from said endframe, and a plurality of walls extending from said endframe, each said wall at least partially surrounding a respective said finger;
a cover attached to said endframe, said cover including engagement structure engaged by said resilient fingers, said endframe and said cover defining a cavity therebetween;

a magnet and a Hall effect sensor each disposed within said cavity, said magnet aligned with said endframe opening, and said Hall effect sensor disposed proximate said magnet.

22. A method for assembling an electric motor, comprising the steps of:
mounting an endframe to a motor housing to substantially enclose a stator, rotor and armature assembly within the motor housing, the endframe including an opening aligned with the armature; and

attaching a cover to the endframe by a snap-fit engagement to define a cavity between the cover and the endframe.

23. The method of Claim 22, comprising the additional step of, prior to said attaching step, positioning a magnet in alignment with said endframe opening, wherein the magnet is enclosed within the cavity in said subsequent attaching step.

24. The method of Claim 22, comprising the additional step of, prior to said attaching step, positioning a Hall effect sensor with respect to the endframe, wherein the Hall effect sensor is captured within the cavity in said subsequent attaching step.

25. The method of Claim 22, comprising the additional step of, after said attaching step, inserting an end of a driven component through axially aligned openings in the cover and the endframe and into a hole in the armature to drivingly couple the motor and the driven component.

26. The method of Claim 22, comprising the additional step of, prior to said mounting step, positioning an armature bearing internally of the motor housing between the endframe and an armature of the motor.